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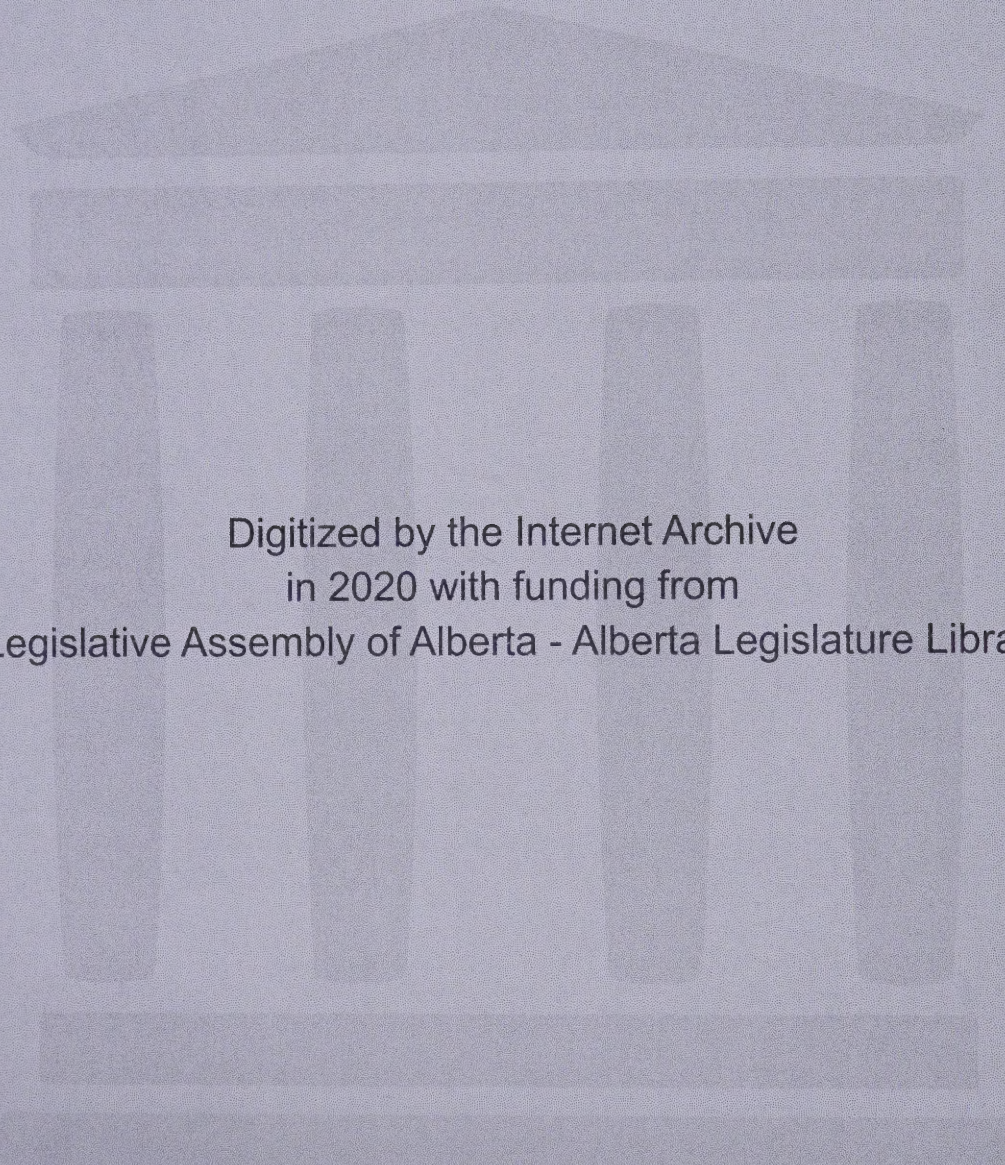
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ANNUAL REPORT
OF
THE MINES DIVISION
OF THE
Department of Mines and Minerals
OF THE
PROVINCE OF ALBERTA

1967

Edmonton:
Printed by L. S. Wall, Queen's Printer

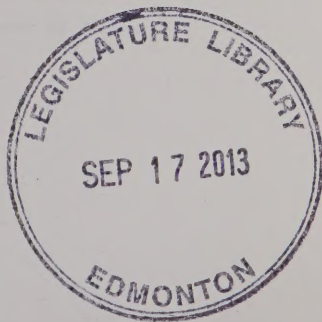


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ANNUAL REPORT
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THE MINES DIVISION
OF THE
Department of Mines and Minerals
OF THE
PROVINCE OF ALBERTA

1967



Edmonton:
Printed by L. S. Wall, Queen's Printer

Edmonton, Alberta,

February 6th, 1968.

TO THE HONOURABLE A. RUSSELL PATRICK,

Minister of Mines and Minerals

Sir:

I have the honour to submit the Annual Report of the Mines Division of the Department of Mines and Minerals for the year ending December 31st, 1967.

Respectfully submitted,

J. D. B. BROWN,

Director of Mines.

ANNUAL REPORT OF THE MINES DIVISION FOR THE YEAR ENDING DECEMBER 31st, 1967

In this report tonnages are quoted in tons of 2,000 pounds.

The output of coal from the mines in the province was 3,601,559 tons with a valuation of \$12,506,450. This shows an increase of 134,305 tons and an increase of \$439,406, compared with the previous year.

There were 20,241 tons of coal used to make 21,503 tons of briquettes valued at \$198,984. This shows a decrease of 6,401 tons of briquettes made and a decrease in valuation of \$55,874, compared with the previous year. There were 7,430 tons of char, valued at \$68,838, made from coal and briquettes.

In addition to the above tonnage, there were 110 tons of coal reported as mined by the Blackfoot Indians, at Gleichen, for their own use.

The disposition of coal for 1967 and comparison with the previous year follows:

	1967 (Tons)	1966 (Tons)
Sold for consumption in Alberta	2,019,036	2,034,814
Sold for consumption in British Columbia	165,372	197,521
Sold for consumption in Saskatchewan	504,606	376,589
Sold for consumption in Manitoba	93,020	115,771
Sold for consumption in Ontario	21,956	24,893
Sold for consumption elsewhere	—	8
Sold to the United States	9,857	12,206
Sold to Japan	773,505	709,977
Sold to railway companies	3,960	6,631
Put to stock	105,544	113,354
Put to waste	10,671	10,316

The above tonnages include lifted from stock and waste heaps which are not included in the total output.

The Alberta consumption includes coal used under colliery boilers and includes coal used making briquettes and char.

There were 35 subsurface and strip mines which produced coal during the year, employing 1,162 persons who worked 263,969 shifts. This shows a decrease of 2 mines, an increase of 16 persons, and a decrease of 11,226 shifts, compared with the previous year. There were 22 strip mines employing 305 persons who worked 70,764 shifts and produced 2,600,574 tons. This shows a decrease of 1 strip mine, an increase of 1 person, a decrease of 6,033 shifts and an increase of 171,722 tons from stripping operations, compared with the previous year.

The number of mines using electrical power during the year was 30. The following table shows the comparison of purchased electrical power in K.W. hrs. by mines for the past ten years.

1958	20,574,436	1963	22,062,185
1959	25,159,068	1964	21,930,976
1960	26,231,225	1965	20,001,530
1961	21,694,596	1966	25,690,710
1962	20,436,598	1967	35,270,464

The total horsepower of electrical motors in use was 28,599 h.p., a decrease of 406 h.p., in comparison with 1966. The following tables show a breakdown of horsepower in use, both in subsurface mining operations and strip mining operations.

THE MINES DIVISION

SUBSURFACE OPERATIONS

Above Ground		Below Ground	
Duty	H.P.	Duty	H.P.
Haulage	2,470	Haulage	1,599
Ventilation	678	Ventilation	245
Air Compressing	2,685	Pumping	201
Preparation Plants	3,501	Cutting & Loading	3,396
Miscellaneous	1,490	Miscellaneous	172
Total	10,824	Total	5,613

STRIP MINING OPERATIONS

Duty	H.P.
Preparation Plants	3,578
Compressors	103
Pumping	282
Drilling	28
Electric Shovels and Draglines	7,429
Miscellaneous	742
Total	12,162

The following figures show the number of certain types of electrical equipment used underground during the past ten years.

	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
Cutting Machines	98	73	71	66	56	46	46	36	43	36
Battery Locomotives	31	26	22	25	27	27	22	15	20	16
Trolley Locomotives	21	18	8	10	9	9	7	5	7	2
Conveyors	45	38	30	33	31	30	30	22	25	32
Coal Drills	74	55	55	59	50	53	45	41	49	38
Continuous Miners	0	0	1	1	1	1	1	2	3	5
Shuttle Cars	0	0	0	0	0	0	2	2	3	5
Face Loaders	13	13	15	17	16	16	9	8	9	10

Twenty-four quarries produced 7,190,326 tons of shale, clay, limestone, building stone, bentonite and oil sands, an increase of 5,222,687 tons compared with the previous year. This very substantial increase is due mainly to the newly opened Great Canadian Oil Sands operation at Tar Island, near Fort McMurray.

The total horsepower of electrical motors used in quarries was 16,162 h.p. The following table shows a breakdown of horsepower in use.

QUARRYING OPERATIONS

Duty	H.P.
Drilling	305
Electric Shovels and Draglines	675
Excavators	6,000
Miscellaneous	9,182
Total	16,162

Two hundred and forty-three inspections were made under the terms of The Coal Mines Regulation Act, 252 in connection with The Workmen's Compensation Board Regulations and 59 under The Quarries Regulation Act.

In addition to the above, 64 inspections were made at 38 abandoned mining locations. Remedial work was required and completed at 22 mines. Ten inspections were made for the cancellation of mining leases.

All complaints made to the Division were investigated.

The total number of accidents in coal mines reported was 21. The number of fatal accidents was nil compared with 1 in the previous year. We are pleased to report that for the first time since statistics were first compiled in 1899 no fatal accidents occurred in either coal mines or quarries during the year. A good deal of credit for this state of affairs should go to

the officials and workmen engaged in the mines and quarries in the province who are active in accident prevention programmes with such success. We hope they will continue to show improvement in the years to come.

There were no prosecutions under The Coal Mines Regulation Act.

Written examinations under The Coal Mines Regulation Act were held on May 2nd at Edmonton and Calgary with successful candidates as follows: 2 third class, 1 first class mine electrician, 1 surveyor (strip mine), 5 foremen (strip mine). One first class certificate (interchange) was granted.

Written examinations under The Quarries Regulation Act were held on May 2nd, May 6th, September 7th and October 24th with successful candidates as follows: 5 managers and 9 foremen.

Two blasters' certificates were issued to successful candidates on oral examinations.

Two examinations were held for miners' certificates and 26 certificates were issued to successful candidates. Fourteen substitute miners' certificates, 13 miners' provisional certificates and 63 miners' permits were granted, making a total of 116 certificates issued which is an increase of 72 certificates for the year.

During January at Mine No. 1757, operated by Alberta Coals Ltd., Wabamun, a fire occurred when cuttings from an acetylene torch ignited slack coal in the crusher and screening plant area. Damage was minor. Another fire of undetermined origin broke out in the secondary crusher on March 14th and damage in this instance was more extensive requiring three days to effect repairs. A third fire occurred on November 29th in a pump house at the stripping pit causing the loss of the pump house and equipment.

At Mine No. 2, operated by The Canmore Mines, Limited, Canmore, a fire occurred on January 2nd in the lower portion of the coke plant causing damage that took a month to repair.

On February 24th, at Mine No. 1742, operated by Century Coals Limited, East Coulee, a fire was discovered in the surface fan drift which destroyed approximately a thirty foot length of same. The suspected cause was a fault in the cut-off to the mine air heating system. Repairs were completed March 3rd.

An underground fire broke out over the week-end of April 26th at Mine No. 1626, operated by Star-Key Mines Limited, St. Albert, when spontaneous heating, previously contained, had rekindled. The fire was fought by the mine rescue team, using McCaa apparatus and due to their prompt efforts it was subdued within a short period. Cinder block stoppings have since been installed and preventive measures are being pursued assiduously and daily inspections of the fire are being carried out

An ignition of gas occurred at Mine No. 2, operated by The Canmore Mines, Limited, Canmore, on May 3rd when a continuous miner struck sparks from a rock intrusion in the Wilson Seam. Several small methane feeders at the face were ignited. The fire was subsequently extinguished with little damage to the mine.

On May 1st the Mines Division took over the direction and administration of Mine Rescue operations within the province at the request and with full co-operation of The Workmen's Compensation Board. A provincial mine rescue competition was held at Canmore on May 27th and all concerned welcomed the resurgence of interest in this phase of mining. The successful team was invited to the National Competition held in Trail, B.C., in June, and they put on a creditable performance coming very close to winning same. We plan to foster and encourage mine rescue training, as these men are vital to the well-being of underground mining.

There has been a good deal of activity in coal prospecting in various areas of the province and indications at present are good that eventually the export of coking coal could expand considerably if and when firm contracts are completed.

In March, Coleman Collieries Limited, Coleman, signed a fifteen year contract to export to Japan a total of 13,500,000 long tons of medium volatile coking coal. The tonnage from this mine will increase from the present 500,000 to 1,000,000 tons per annum by 1970. The first integral train in Western Canada was inaugurated to haul coal from Coleman to Port Moody in British Columbia. Plans have been prepared by Coleman Collieries Limited to commence work in 1968 on a coal preparation plant to process and load one million tons of clean coal per annum.

ANNUAL REPORT, 1967

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NUMBER OF MINES PRODUCING, OPENED AND ABANDONED
DURING THE YEAR ACCORDING TO AREAS AND KIND OF COAL

Director of Mines - J.D.B. Brown, Agriculture Building,
Edmonton, Alberta. Telephone 229-4421

Assistant Director of Mines - P. Melson, Agriculture
Building, Edmonton, Alberta. Telephone 229-4422

Electrical Inspector of Mines - J.S. Watson, Agriculture
Building, Edmonton, Alberta. Telephone 229-4425

Inspection District	Area	Area Number	Character of Coal	No. of Mines producing during the year	No. of Mines opened during the year	No. of Mines abandoned during the year	Name and Address of District Inspectors of Mines
Calgary	Carbon	6	Sub-bituminous	3	J.J. Kubin, 806-Centre Street South, Calgary, Alta. Tel. 269-6687
	Cascade	7	Bituminous	1	...	...
	Drumheller	14	Sub-bituminous	4	...	...
	Sheerness	38	Sub-bituminous	1	...	...
Edmonton	Ardley	1	Sub-bituminous	2	M. Aschacker Room 801, Agriculture Building, Edmonton, Alta. Tel. 229-4424
	Camrose	5	Sub-bituminous	1	...	...
	Castor	8	Sub-bituminous	3	...	...
	Edmonton	15	Sub-bituminous	4	...	...
	Pembina	31	Sub-bituminous	3	...	...
	Smoky River	10	Bituminous	1	1	...	
	Tofield	42	Sub-bituminous	1	...	...
	Westlock	45	Sub-bituminous	2	...	...
	Wetaskiwin	46	Sub-bituminous	1	...	...
Lethbridge	Brooks	3	Sub-bituminous	1	I.N. Potter, Administration Building, 909-3rd Ave. North, Lethbridge, Alta. Tel. 328-4471
	Champion	9	Sub-bituminous	1	...	...
	Crownest	12-13	Bituminous	3	...	...
	Lethbridge	20	Bituminous	1	...	...
	Redcliff	34	Sub-bituminous	1	...	...
	Taber	41	Sub-bituminous	1	...	...
Total				35	1	...	

THE MINES DIVISION

ESTIMATED ALBERTA COAL RESERVES

As at February, 1945

Name of Area	Total Area sq. mi.	Area underlain by coal sq. mi.	Thickness of coal feet	Tons per acre foot	Tonnage millions of tons	Totals millions of tons
KOOTENAY FORMATION						
Smoky River.....	1,490	55	50	1,860	3,300	
Brule.....	715	36	23	1,860	1,000	
Mountain Park.....	690	108	40	1,875	5,200	
Nordegg.....	835	46	27	1,840	1,500	
Clearwater.....	645	18	25	1,860	500	
Panther.....	440	11	25	1,860	300	
Cascade.....	870	100	32	1,880	3,900	
Highwood.....	745	90	60	1,860	6,100	
Oldman.....	515	72	30	1,800	2,500	
Crowsnest.....	840	140	30	1,900	5,100	29,700
BELLY RIVER (including Edmonton)						
Halcourt.....	970	72	3	1,800	300	
Prairie Creek.....	565	25	15	1,820	400	
Coalspur.....	1,125	100	30	1,900	3,600	
Saunders.....	745	72	20	1,840	1,700	
Morley.....	1,480	80	10	1,800	900	
Pekisko.....	945	75	15	1,820	1,300	
Pincher.....	955	36	7	1,860	300	
Sexsmith.....	1,570	2	5	1,800	10	
Valhalla.....	1,765	5	5	1,800	30	
Red Deer.....	1,625	20	20	1,820	500	
Westlock.....	1,705	5	6	1,800	40	9,080
BELLY RIVER						
Magrath.....	1,550	72	6	1,870	500	
Lethbridge.....	575	150	4	1,860	700	
Milk River.....	2,735	80	6	1,850	600	
Pakowici.....	2,590	41	6	1,800	300	
Taber.....	2,770	80	3	1,860	300	
Redcliff.....	2,015	1	4	1,780	5	
Brooks.....	2,270	30	4	1,780	100	
Steveville.....	2,015	3	3	1,780	10	
Empress.....	2,015	1	3	1,780	3	
Wainwright.....	1,080	2	5	1,780	10	
Pakan.....	3,025	2	5	1,780	10	
Rochester.....	1,150	1	6	1,800	7	
Slave.....	2,375	2	4	1,800	9	
High Prairie.....	3,020	2	4	1,800	9	2,563
EDMONTON FORMATION						
Pembina.....	2,630	50	25	1,870	1,500	
Edmonton.....	2,270	50	12	1,790	700	
Tofield.....	900	20	15	1,760	300	
Camrose.....	865	10	10	1,760	100	
Castor.....	2,880	20	15	1,770	300	
Ardley.....	720	20	10	1,820	200	
Big Valley.....	540	7	6	1,860	50	
Carbon.....	1,190	25	10	1,850	300	
Sheerness.....	1,765	20	10	1,800	200	
Drumheller.....	430	75	15	1,820	1,300	
Gleichen.....	2,125	10	5	1,780	60	
Champion.....	1,620	10	5	1,850	60	
Wotaskiwin.....	1,730	10	6	1,780	70	
Whitcourt.....	1,440	10	6	1,850	70	
Mountain House.....	940	2	4	1,800	9	5,219
Grand Total.....	72,435	1,974	...	...	...	46,562

Extract of Page D-3 and D-4 of the Alberta Submission to the Royal Commission on the Coal Industry of Canada.

PARTICULARS WITH REFERENCE TO THE COAL MINING INDUSTRY IN THE
PROVINCE OF ALBERTA DURING THE YEAR ENDING DECEMBER 31, 1967.

SUMMARY OF STATISTICS

Number of tons of coal produced.....	3,601,559
Total valuation of coal produced.....	\$ 12,506,450
Number of tons of briquettes made.....	21,503
Total valuation of briquettes made.....	\$ 198,984
Number of tons of char made.....	7,430
Total valuation of char made.....	\$ 68,838
Number of mines in operation.....	35
Number of mines opened.....	1
6 mines or 17.1% of the total operating produced	0.05% of the output..
4 mines or 11.4% of the total operating produced	0.40% of the output..
6 mines or 17.1% of the total operating produced	1.33% of the output..
11 mines or 31.4% of the total operating produced	6.94% of the output..
1 mine or 2.9% of the total operating produced	1.67% of the output..
1 mine or 2.9% of the total operating produced	3.57% of the output..
3 mines or 8.6% of the total operating produced	22.41% of the output..
3 mines or 8.6% of the total operating produced	63.63% of the output..
Average number of persons employed.....	1,162
Average number of persons employed in underground mining.....	857
Average number of persons employed in strip mining.....	305
Average number of days worked.....	227
Total number of manshifts.....	263,969
Number of serious accidents above ground.....	2
Number of serious accidents below ground.....	2
Number of slight accidents above ground.....	4
Number of slight accidents below ground.....	13
Total purchased electric power (kilowatt hours).....	35,270,464
Number of trade name certificates issued.....	1
Number of provisional second class certificates issued.....	3
Number of provisional third class certificates issued.....	1
Number of provisional electricians' certificates issued.....	3
Number of provisional strip mine foremen's certificates issued.....	5
Number of provisional miners' certificates issued.....	13
Number of miners' permits issued.....	63
Number of miners' certificates issued.....	26
Number of first class certificates issued.....	1
Number of third class certificates issued.....	2
Number of first class electricians' certificates issued.....	1
Number of strip mine managers' certificates issued.....	1
Number of strip mine foremen's certificates issued.....	6
Number of strip mine surveyors' certificates issued.....	1
Number of first class certificates issued up to Dec. 31/67.....	316
Number of second class certificates issued up to Dec. 31/67.....	624
Number of third class certificates issued up to Dec. 31/67.....	1,867
Number of mine surveyors' certificates issued up to Dec. 31/67.....	251
Number of first class mine electricians' certificates issued up to Dec. 31/67.....	177
Number of second class mine electricians' certificates issued up to Dec. 31/67.....	139
Number of strip mine managers' certificates issued up to Dec. 31/67.....	177
Number of strip mine foremen's certificates issued up to Dec. 31/67.....	267
Number of strip mine blasters' certificates issued up to Dec. 31/67.....	27
Number of strip mine surveyors' certificates issued up to Dec. 31/67.....	2
Number of miners' certificates issued up to Dec. 31/67.....	21,100

THE MINES DIVISION

PARTICULARS WITH REFERENCE TO QUARRIES IN THE
PROVINCE OF ALBERTA DURING THE YEAR ENDING DECEMBER 31, 1967.

SUMMARY OF STATISTICS

Number of tons of limestone produced.....	1,510,645
Number of tons of bentonite produced.....	25,619
Number of tons of shale and clay produced.....	480,035
Number of tons of building stone produced.....	2,621
Number of tons of oil-sands produced.....	5,171,406
Number of quarries in operation.....	24
Number of quarries opened.....	1
Number of quarries abandoned.....	3
Number of persons employed.....	287
Average number of days worked.....	105
Total number of man-shifts.....	65,872
Number of pounds of dynamite used.....	78,928
Number of pounds of ammonia nitrate used.....	439,215
Number of detonators used.....	7,687
Number of shots fired.....	6,323
Number of primers used.....	1,701
Number of missed fire shots.....	5
Amount of prima cord used (feet).....	27,532
Number of provisional managers' certificates issued.....	4
Number of provisional foremen's certificates issued.....	7
Number of managers' certificates issued.....	5
Number of foremen's certificates issued.....	9
Number of blasters' certificates issued.....	2
Number of managers' certificates issued up to December 31st, 1967.....	29
Number of foremen's certificates issued up to December 31st, 1967.....	55
Number of blasters' certificates issued up to December 31st, 1967.....	65

ANNUAL PRODUCTION AND VALUATION OF COAL FROM MINES
IN THE PROVINCE OF ALBERTA
For the Years 1948 to 1967 Inclusive

Year	Output Tons	Valuation Dollars
1948.....	8,111,013	\$ 41,875,044
1949.....	8,616,983	44,541,538
1950.....	8,118,206	41,631,579
1951.....	7,661,276	41,000,953
1952.....	7,194,472	39,974,318
1953.....	5,917,423	32,158,435
1954.....	4,859,136	26,349,275
1955.....	4,456,578	23,486,399
1956.....	4,329,639	23,283,966
1957.....	3,155,354	17,287,229
1958.....	2,519,939	12,778,111
1959.....	2,549,517	12,892,747
1960.....	2,404,093	11,439,705
1961.....	2,027,826	10,471,217
1962.....	2,087,310	9,983,327
1963.....	2,289,943	9,866,962
1964.....	2,971,133	11,189,087
1965.....	3,413,928	12,172,001
1966.....	3,467,254	12,067,044
1967.....	3,601,559	12,506,450

PER CAPITA PRODUCTION OF MINES IN THE PROVINCE
For the Years 1948 to 1967 Inclusive

Year	Gross Tons of coal mined	Total average No. of men employed	Tons of coal mined per man employed
1948.....	8,111,013	8,865	915
1949.....	8,616,983	8,682	993
1950.....	8,118,206	7,999	1,015
1951.....	7,661,276	7,339	1,044
1952.....	7,194,472	6,936	1,037
1953.....	5,917,423	5,760	1,027
1954.....	4,859,136	4,719	1,030
1955.....	4,456,578	3,801	1,172
1956.....	4,329,639	3,443	1,258
1957.....	3,155,354	2,795	1,129
1958.....	2,519,939	2,021	1,247
1959.....	2,549,517	1,720	1,482
1960.....	2,404,093	1,729	1,390
1961.....	2,027,826	1,323	1,533
1962.....	2,087,310	1,281	1,629
1963.....	2,289,943	1,151	1,989
1964.....	2,971,133	1,188	2,501
1965.....	3,413,928	1,181	2,891
1966.....	3,467,254	1,146	3,026
1967.....	3,601,559	1,162	3,099

THE MINES DIVISION

CLASSIFICATION OF OUTPUT IN TONS DURING THE YEARS 1948 to 1967 INCLUSIVE

Year	Bituminous	Sub-bituminous	Coal used in Coke Production	Tons of Briquettes Made	Tons of Coke Made
1948.....	4,920,796	3,190,217	78,795	321,574	45,718
1949.....	5,495,327	3,121,656	91,361	460,643	54,922
1950.....	4,793,020	3,325,186	23,079	409,855	16,637
1951.....	4,659,289	3,001,987	6,957	345,768	3,959
1952.....	4,378,622	2,815,850	3,474	661,862	574
1953.....	3,517,499	2,399,924	...	665,556	...
1954.....	2,402,185	2,456,951	...	635,501	...
1955.....	2,114,892	2,341,686	...	435,785	...
1956.....	2,064,723	2,264,916	...	525,202	...
1957.....	1,265,844	1,889,510	...	265,645	...
1958.....	834,236	1,683,683	...	128,512	...
1959.....	814,819	1,734,698	...	99,499	...
1960.....	863,517	1,340,376	2,352	44,111	1,216
1961.....	666,226	1,361,600	661	34,534	491
1962.....	590,139	1,497,171	...	28,631	40
1963.....	635,650	1,654,293	843	37,338	11,677
1964.....	866,221	2,104,912	6,412	38,230	19,971
1965.....	859,176	2,554,752	46,016	34,698	38,804
1966.....	879,569	2,587,685	28,824	27,904	11,587
1967.....	937,836	2,663,723	20,241	21,503	7,450

* Char

AMOUNT OF COAL SOLD IN TONS DURING THE YEARS 1943 to 1967 INCLUSIVE FOR CONSUMPTION IN:

Year	Railways	Alberta	B.C.	Sask.	Manitoba	Ontario	Quebec	U.S.A.	China and Japan	Total
1948.....	2,312,273	1,593,629	945,700	1,413,283	625,009	202,520	58	84,435	200,947	7,377,914
1949.....	3,012,425	1,614,306	891,132	1,232,890	629,456	187,976	...	45,972	3,475	7,617,632
1950.....	2,308,365	1,672,519	873,538	1,366,723	586,920	312,576	...	105,765	...	7,226,413
1951.....	2,443,326	1,427,114	898,533	1,322,162	492,737	182,753	...	80,270	44,317	6,891,212
1952.....	2,065,365	1,234,307	1,021,484	1,241,716	384,924	126,381	...	71,817	1,588	6,147,582
1953.....	1,625,783	1,045,482	859,385	1,034,594	274,758	73,117	...	47,119	...	4,960,238
1954.....	743,743	1,064,817	891,194	1,995,882	292,455	85,836	...	33,124	...	4,107,051
1955.....	431,639	1,080,379	932,764	893,377	293,719	90,727	...	32,921	...	3,755,546
1956.....	385,388	1,020,538	860,329	871,719	304,918	75,029	120	45,692	...	3,583,733
1957.....	152,693	1,876,395	672,527	690,257	247,480	48,379	155	46,079	...	2,784,780
1958.....	56,120	838,535	532,911	584,025	226,302	54,887	122	37,134	40,745	2,352,508
1959.....	39,122	874,622	437,118	543,663	239,503	32,828	160	33,435	21,932	2,351,110
1960.....	1,045	845,806	779,668	362,383	201,572	40,505	157	30,283	361,336	2,222,355
1961.....	51,128	791,651	321,909	232,868	159,744	35,466	115	18,066	343,720	1,954,627
1962.....	32,003	901,107	283,651	347,012	153,561	29,952	75	9,219	316,787	2,073,367
1963.....	16,001	1,073,606	262,433	343,634	131,471	29,309	118	5,593	410,558	2,272,713
1964.....	14,451	1,620,493	261,990	279,171	122,590	32,261	x	14,805	612,544	2,958,791
1965.....	10,798	1,928,684	276,608	388,796	130,861	31,733	85	14,123	614,801	3,396,489
1966.....	6,631	2,034,814	197,521	376,589	115,771	24,893	*	12,206	709,977	3,478,410
1967.....	3,960	2,019,036	166,668	503,396	92,934	21,956	...	9,857	773,505	3,591,312

* Includes 46 tons to N.W.T.

* Includes 8 tons to West Germany

THE MINES DIVISION

COAL PRODUCED BY YEARS FROM 1963 to 1967

BITUMINOUS COAL FIELD

Areas	1963	1964	1965	1966	1967
Group 1:					
Cascade.....	215,269	240,505	243,084	245,469	288,954
Smoky River.....	...	...	...	...	24,835
Group 2:					
Crownest.....	360,268	554,783	609,408	632,974	620,962
Group 3:					
Coalspur.....	5,206	5,896	194	...	...
Halcourt.....	280	...	...	...	...
Lethbridge.....	54,627	65,037	6,490	1,126	3,085
Total.....	635,650	866,221	859,176	879,569	937,836

SUB-BITUMINOUS COAL FIELD

Group 4:					
Ardley.....	38,405	34,405	32,034	30,358	25,130
Brooks.....	6,633	6,942	6,783	6,384	5,160
Carbon.....	15,195	14,011	11,731	9,028	7,457
Champion.....	3,710	3,151	3,028	1,507	458
Drumheller.....	305,508	246,123	285,175	231,893	185,037
Edmonton.....	85,316	86,478	92,277	80,288	63,123
Gleichen.....	1,470	829	223	...	...
Pembina.....	358,275	841,281	968,488	1,133,180	1,196,637
Taber.....	28,967	27,116	104,398	60,670	9,929
Wetaskiwin.....	2,575	2,341	1,750	1,372	114
Group 5:					
Camrose.....	23,019	23,411	26,400	17,808	16,842
Castor.....	569,868	615,072	768,181	774,339	859,694
Redcliff.....	2,023	1,993	2,016	1,856	541
Sheerness.....	174,601	164,364	210,746	199,248	259,720
Tofield.....	17,550	15,390	17,370	15,504	12,026
Westlock.....	21,178	22,005	24,152	24,250	21,855
Total.....	1,654,293	2,104,912	2,554,752	2,587,685	2,663,723

How the total Tonnage of BITUMINOUS COAL from the Province was disposed of by areas during 1967

Areas	Sold to Railway Companies	Sold for Consumption in:							Total Disposition	Put to Stock	Put to Waste	Lifted from Stock	Lifted from Waste	Total Tonnage
		Alberta	British Columbia	Sask.	Manitoba	Ontario	United States	Japan						
Group 1: Cascade Smoky River	1021	24127	15458	...	399	17557	9290	221709	289561	39309	...	34496	5420	288954
Group 2: Crowanest	...	...	...	...	...	...	...	...	...	24835	...	...	...	24835
Group 3: Lethbridge	...	8064	78883	...	...	739	427	551796	639909	11139	...	30086	...	620962
	...	2548	34	...	...	...	...	...	2582	475	245	217	...	3085
Total:	1021	34739	94375	...	399	18296	9717	773505	932052	75758	245	64799	5420	937836

THE MINES DIVISION

How the total Tonnage of SUB-BITUMINOUS COAL from the Province was disposed of by areas during 1967

Areas	Sold for Consumption in:								Total Disposition	Put to Stock	Put to Waste	Lifted from Stock	Lifted from Waste	Total Tonnage
	Sold to Railway Companies	Alberta	British Columbia	Sask.	Manitoba	Ontario	Quebec	United States						
Group 4:	...	24792	...	...	...	...	...	...	24792	...	338	...	...	25130
Ardley	...	5160	...	...	...	...	...	...	5160	...	...	...	...	5160
Brooks	...	7457	...	...	...	...	...	...	7457	...	...	...	...	7457
Carbon	...	458	...	...	...	...	...	...	458	...	...	...	...	458
Champion	...	104212	...	...	13183	2964	...	...	191000	35749	...	...	...	185037
Drumheller	990	62695	31247	38404	...	428	...	...	63123	29786	...	...	...	63123
Edmonton	...	1196637	...	...	...	...	...	...	1196637	...	...	...	...	1196637
Pembina	...	6418	2650	...	...	...	...	26	9264	...	635	...	...	9929
Taber	...	114	...	...	...	...	...	...	114	...	...	...	...	114
Wetaskiwin	...	12677	...	...	...	...	...	...	12677	...	4165	...	...	16842
Group 5:	...	516717	35545	247994	56356	117	...	...	858651	...	1043	...	...	858694
Camrose	1922	...	...	...	...	...	...	...	501	...	40	...	...	541
Castor	...	16793	1355	218208	23082	151	...	114	259720	...	...	...	...	259720
Redcliff	27	9702	...	...	...	...	...	...	9702	...	...	...	...	12026
Sheerness	...	19974	...	...	...	...	...	...	19974	...	1881	...	...	21855
Torileid	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Westlock	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total:	2939	1984297	70997	504606	92621	3660	...	140	2659260	29786	10426	35749	...	2663723

How the total Tonnage of COAL from the Province was disposed of by months during 1967

Months	Sold for Consumption in:									Total Disposition	Put to Stock	Put to Waste	Lifted from Stock	Lifted from Waste	Total Tonnage
	Sold to Railway Companies	Alberta	British Columbia	Sask.	Manitoba	Ontario	Quebec	United States	Japan						
January	666	203810	16162	96050	16436	4199	...	1297	75019	413639	13247	1789	21268	59	407348
February	385	178259	15442	79400	12466	1504	...	1224	65457	354137	3752	1586	10165	563	348747
March	531	193826	17867	53927	7292	2706	...	334	64140	340623	4357	1338	7703	812	337803
April	348	150227	13591	9729	1357	764	...	665	63317	239998	5147	427	7617	548	237407
May	35	136574	10852	2016	656	888	...	960	53416	205397	18677	70	2354	658	221132
June	75	70235	9594	2224	86	313	...	1436	57059	141022	22647	22	300	1293	162098
July	...	83012	5020	725	118	123	...	715	26834	116547	7824	14	...	96	124289
August	78	152292	11781	3760	1300	1566	...	572	87342	259691	5877	13	3357	301	261923
September	345	160684	13040	13373	7088	1705	...	417	69600	266252	5374	292	1871	157	269890
October	712	241213	14391	52640	21240	3834	...	616	77481	412127	5218	1656	18297	742	399962
November	453	242958	19965	87851	13616	1747	...	1248	65273	433111	12737	1827	9043	39	438593
December	332	204946	17667	132911	11365	2607	...	373	68567	408768	687	1637	18573	152	392367
Total:	3960	2019336	165372	504606	93020	21956	...	9857	773505	3591312	105544	10671	100548	5420	3601559
% of Total Dispositions:	.11	56.24	4.60	14.05	2.59	.61	...	.27	21.53						

How the total Tonnage of BRIQUETTES from the Province was disposed of during 1967

Briquettes:	4682	11105	1993	...	374	1570	19724	1235	1635	1091	...	21503
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How the total Tonnage of CHAR from the Province was disposed of during 1967

Char:	...	61	428	3170	...	3659	499	3785	513	...	7430
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THE MINES DIVISION

How the total Tonnage of BITUMINOUS COAL was disposed of by months during 1967

Months	Sold for Consumption in:								Total Disposition	Put to Stock	Put to Waste	Lifted from Stock	Lifted from Waste	Total Tonnage
	Sold to Railway Companies	Alberta	British Columbia	Sask.	Manitoba	Ontario	Quebec	United States	Japan					
January	284	3481	6190	...	...	3608	...	1256	75019	12454	75	19662	59	82646
February	194	2234	8946	...	...	1187	...	1224	65657	2695	100	6683	563	74791
March	145	5959	11530	...	...	2560	...	334	64310	4153	70	6580	812	81499
April	95	2887	9089	...	...	724	...	624	63317	4470	...	5660	548	75008
May	35	2760	7590	...	...	888	...	960	53416	11168	...	2354	658	73805
June	75	3277	8367	...	...	513	...	1436	57059	10217	...	...	1293	79451
July	...	329	4752	...	...	123	...	715	28634	7824	...	...	96	40481
August	...	1600	9456	...	...	1353	...	572	87342	1840	...	3050	301	98812
September	...	1368	8800	...	399	1341	...	417	69600	5234	...	1370	157	85632
October	...	3493	3930	...	...	2814	...	616	77481	4221	...	7599	742	84214
November	105	1808	9220	...	...	1006	...	1222	65273	11482	...	...	39	90077
December	88	5543	6505	...	...	2379	...	331	68567	...	...	11841	152	711420
Total:	1021	34739	94375	...	399	18296	...	9717	773505	75758	245	64799	5420	937836
% of Total Disposition:	.11	3.73	10.1304	1.96	...	1.04	82.99

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How the total Tonnage of SUB-BITUMINOUS COAL was disposed of by months during 1967

Months	Sold for Consumption in:								Total Disposition	Put to Stock	Put to Waste	Lifted from Stock	Lifted from Waste	Total Tonnage
	Sold to Railways	Alberta	British Columbia	Sask.	Manitoba	Ontario	Quebec	United States	Japan					
January	382	200329	9972	96050	16436	591	...	41	...	793	1714	1606	...	324702
February	191	176025	6496	79400	12466	317	...	...	...	1057	1486	3482	...	273956
March	386	187867	6337	53927	7292	146	...	...	...	204	1268	1123	...	263304
April	253	147340	4502	9729	1357	40	...	31	...	677	427	1957	...	162399
May	...	133814	3262	2016	656	...	...	...	...	7509	70	...	...	147327
June	...	66958	1227	2224	86	...	...	...	...	12430	22	300	...	82647
July	...	82683	268	725	118	...	...	...	...	70195	14	...	...	83808
August	78	151692	2325	3760	1300	213	...	...	...	4037	13	...	...	163111
September	315	159316	4240	13373	6689	364	...	...	...	159368	292	501	...	83808
October	712	237720	10461	52840	21240	1020	...	...	...	140	1656	10698	...	184258
November	348	241150	10745	87851	13616	741	...	...	...	997	1827	9043	...	315748
December	244	199403	11162	102911	11365	228	...	42	...	1255	1637	6732	...	348516
Total:	2939	1984297	70997	504606	92621	3660	...	140	...	29786	10426	35749	...	320947
% of Total Disposition:	.11	74.61	2.67	18.98	3.48	.14	...	.01	...					2663723

THE MINES DIVISION

PER CAPITA PRODUCTION OF MINES BY AREAS

BITUMINOUS COAL FIELD

Area	Strip and Underground Mining						Strip Mining						Underground Mining					
	Gross tons of coal mined	Total average No. of men employed	Tons of coal mined per man employed	Total No. of man-shifts	Tons of coal mined per eight man-shift		Gross tons of coal mined	Total average No. of men employed	Tons of coal mined per man employed	Total No. of man-shifts	Tons of coal mined per eight hour man-shift		Gross tons of coal mined	Total average No. of men employed	Tons of coal mined per man employed	Total No. of man-shifts	Tons of coal mined per eight hour man-shift	
Group 1:																		
Cascade.....	288,954	223	1,296	53,069	5.44													
Smoky River.....	24,835	25	993	4,124	6.02													
Group 2:																		
Crowsnest.....	620,962	483	1,286	114,076	5.44													
Group 3:																		
Lethbridge.....	3,085	5	617	994	3.10													
Total.....	937,836	736	1,274	172,263	5.44		118,787	32	3,712	7,218	16.46		839,049	704	1,163	165,045	4.96	

SUB-BITUMINOUS COAL FIELD

[illegible]

SUMMARY

Bituminous.....	937,436	736	1,274	172,263	5.44	118,787	32	3,712	7,218	16.46	819,049	704	1,163	165,045	4.96
Sub-Bituminous..	2,663,723	426	6,253	91,706	29.05	2,481,787	273	9,091	63,546	39.05	181,936	153	1,189	28,160	6.46
Total.....	3,601,559	1,162	3,099	263,969	13.64	2,600,574	305	8,826	70,764	36.75	1,000,985	857	1,168	193,205	5.18

THE MINES DIVISION

OUTPUT AND NUMBER OF MINES PRODUCING

Kind of Coal	Under 1,000 Tons		1,000 to 5,000 Tons		5,000 to 10,000 Tons		10,000 to 50,000 Tons		50,000 to 100,000 Tons		100,000 to 150,000 Tons		150,000 to 200,000 Tons		200,000 to 300,000 Tons		Over 300,000 Tons		Total	
	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output
Bituminous.....	..	...	1	3,085	..	...	2	65,716	1	60,276	..	...	..	...	1	288,954	1	519,805	6	937,836
Sub-bituminous.	6	1,603	3	11,299	6	48,088	9	184,076	..	...	1	128,486	..	...	2	518,448	2	1,771,723	29	2,663,723
Total.....	6	1,603	4	14,384	6	48,088	11	249,792	1	60,276	1	128,486	..	...	3	807,402	3	2,291,528	35	3,601,559

AMOUNT OF COAL DISPOSED OF DURING THE YEAR BY AREA, ACCORDING TO SIZE GRADING

AREA \ SIZE GRADING	RUN OF MINE	LUMP OR COBBLE	EGG	NUT OR STOVE	PRE-PARED STOKER	NUT SLACK	SLACK	TOTAL BY AREA.
FOR CONSUMPTION IN ALBERTA								
Cascade	3355	111	...	80	215	45	20321	24127
Crowsnest	...	...	...	...	2779	...	5285	8064
Lethbridge	376	729	301	...	1070	...	72	2548
Ardley	...	6184	4655	913	9732	...	3308	24792
Brooks	...	2049	...	513	1734	...	864	5160
Carbon	2285	241	...	713	1924	70	2224	7457
Champion	...	105	47	91	104	...	111	458
Drumheller	...	9591	2518	4024	11374	19285	57420	104212
Edmonton	91	13538	2542	18128	15477	3	12916	62695
Pembina	8	3455	5423	3762	5525	1176724	1740	1196637
Taber	1387	1497	...	1686	1377	...	471	6418
Wetaskiwin	...	13	...	66	13	17	5	114
Camrose	...	2901	3944	1477	2833	438	1084	12677
Castor	249010	36388	17867	16107	84156	2512	110677	516717
Redcliff	...	366	...	105	30	...	...	501
Sheerness	...	1932	1478	1629	11062	...	682	16783
Tofield	...	1452	2970	1285	3253	630	112	9702
Westlock	...	3883	...	9521	4525	607	1438	19974
Total	256512	84435	41745	60100	157183	1200331	218730	2019036
FOR CONSUMPTION IN JAPAN								
Cascade	...	...	...	...	7285	...	214424	221709
Crowsnest	...	...	...	...	...	551796	...	551796
Total	...	...	...	...	7285	551796	214424	773505

THE MINES DIVISION

AMOUNT OF COAL DISPOSED OF DURING THE YEAR BY AREA, ACCORDING TO SIZE GRADING

AREA	SIZE GRAD- ING	RUN OF MINE	LUMP OR COBBLE	EGG	NUT OR STOVE	PRE- PARED STOKER	NUT SLACK	SLACK	TOTAL BY AREA.
			FOR CONSUMPTION IN BRITISH COLUMBIA						
Cascade	...	...	851	...	1002	12071	978	556	15458
Crowsnest	...	...	...	...	...	6623	...	72260	78883
Lethbridge	...	...	34	...	...	...	...	...	34
Drumheller	...	...	12600	8974	1367	8306	...	...	31247
Taber	...	...	...	...	...	...	2850	...	2850
Castor	...	...	7196	2913	1067	22292	2077	...	35545
Sheerness	...	...	22	42	...	1291	...	...	1355
Total	...	...	20703	11929	3436	50583	5905	72816	165372
			FOR CONSUMPTION IN SASKATCHEWAN						
Drumheller	...	...	22794	7851	2239	1004	...	4516	38404
Castor	171207	...	8596	2206	13024	7547	35718	9696	247994
Sheerness	98061	...	603	1656	8165	8723	69019	31981	218208
Total	269268	...	31993	11713	23428	17274	104737	46193	504606
			FOR CONSUMPTION IN MANITOBA						
Cascade	...	...	...	...	399	...	...	...	399
Drumheller	...	...	9225	2643	478	837	...	...	13183
Castor	...	...	9546	1361	2036	43395	...	18	56356
Sheerness	...	...	655	455	1538	20434	...	...	23082
Total	...	...	19426	4459	4451	64666	...	18	93020

AMOUNT OF COAL DISPOSED OF DURING THE YEAR BY AREA, ACCORDING TO SIZE GRADING

AREA	SIZE GRAD- ING	RUN OF MINE	LUMP OR COBBLE	EGG	NUT OR STOVE	PRE- PARED STOKER	NUT SLACK	SLACK	TOTAL BY AREA.
FOR CONSUMPTION BY RAILWAY COMPANIES									
Cascade		440	35	...	44	471	...	31	1021
Drumheller		...	168	412	410	...	...	...	990
Castor		1828	...	...	40	54	1922
Sheerness		27	...	...	...	...	27
Total		440	203	2267	454	471	40	85	3960
FOR CONSUMPTION IN ONTARIO									
Cascade		...	580	...	...	14078	1814	1085	17557
Crowsnest		739	...	...	739
Drumheller		...	2079	770	...	115	...	...	2964
Edmonton		...	345	...	83	...	...	...	428
Castor		...	117	...	...	...	...	...	117
Sheerness		151	...	...	151
Total		...	3121	770	83	15083	1814	1085	21956
FOR CONSUMPTION IN UNITED STATES									
Cascade		7616	...	...	...	...	1674	...	9290
Crowsnest		427	...	427
Taber		...	8	...	...	18	...	...	26
Sheerness		114	...	...	...	...	114
Total		7616	8	114	...	18	2101	...	9857

THE MINES DIVISION

DISPOSITION OF ALBERTA COAL									
1967	SOLD TO				EMPLOYEES	USED MAKING		FOR COLLIERY BOILERS, RAILROADS ETC.	TOTAL TONNAGE
	INDUSTRIAL CONSUMERS	DEALERS FOR RE-SALE	DOMESTIC CONSUMERS	BRIQUETTES		CHAR			
JANUARY	135890	16380	48856	353	2152	...	179	203810	
FEBRUARY	122771	12914	40684	210	1503	...	177	178259	
MARCH	146197	10726	34116	280	2365	...	142	193826	
APRIL	132190	3339	12543	180	1815	...	160	150227	
MAY	128400	1318	4327	91	2354	...	84	136574	
JUNE	64741	382	1892	44	3105	...	71	70235	
JULY	81877	162	698	13	262	...	...	83012
AUGUST	149393	777	1686	67	1249	...	120	153292	
SEPTEMBER	144319	5463	9853	173	803	...	73	160684	
OCTOBER	176557	16290	45666	268	2341	...	91	241213	
NOVEMBER	173797	15479	52406	393	701	...	182	242958	
DECEMBER	141882	14609	46315	346	1591	...	203	204946	
TOTAL	1598014	97839	299042	2418	20241	...	1482	2019036	

PRODUCTION OF COAL PER EIGHT-HOUR MAN-SHIFT
For the Years 1948 to 1967 Inclusive

Year	Gross tons of coal mined	Total No. of Eight- hour Man-shifts	Average No. of tons of coal mined per Eight-hour shift
1948.....	8,111,013	1,894,837	4.280
1949.....	8,616,983	1,910,922	4.510
1950.....	8,118,206	1,735,316	4.678
1951.....	7,661,276	1,683,061	4.552
1952.....	7,194,472	1,522,264	4.726
1953.....	5,917,423	1,141,531	5.184
1954.....	4,859,136	943,558	5.150
1955.....	4,456,578	783,239	5.690
1956.....	4,329,639	750,318	5.770
1957.....	3,155,354	535,346	5.894
1958.....	2,519,939	386,636	6.517
1959.....	2,549,517	377,870	6.747
1960.....	2,404,093	366,970	6.551
1961.....	2,027,826	285,142	7.112
1962.....	2,087,310	277,198	7.530
1963.....	2,289,943	254,671	8.992
1964.....	2,971,133	285,039	10.423
1965.....	3,413,928	288,871	11.820
1966.....	3,467,254	275,195	12.590
1967.....	3,601,559	263,969	13.643

THE MINES DIVISION

AMOUNT OF MINE TIMBER USED DURING THE YEAR

BITUMINOUS COAL FIELD

Area	Timber lineal feet	Lumber B. M. feet	Lagging lineal feet	Ties lineal feet	Sprags lineal feet
Group 1:					
Cascade.....	160,772	...	856,532	20,044	...
Smoky River.....	5,740	5,200	10,800	600	...
Group 2:					
Crowanest.....	913,309	695,950	102,683	13,824	...
Group 3:					
Lethbridge.....	6,800	...	...	550	...
Total.....	1,086,621	701,150	970,015	35,018	...

SUB-BITUMINOUS COAL FIELD

Group 4:					
Carbon.....	4,000	...	400	400	...
Champion.....	1,500	...	3,000	350	...
Drumheller.....	158,236	...	...	24,323	...
Edmonton.....	126,610	23,000	20,000	8,000	...
Group 5:					
Redcliff.....	4,660	...	...	...	...
Total.....	295,006	23,000	23,400	33,073	...

PARTICULARS OF LAMPS IN THE BITUMINOUS AND SUB-BITUMINOUS COAL FIELDS DURING THE YEARS 1966 and 1967.

BITUMINOUS COAL FIELD

	1966	1967
Portable Electric Lamps, Edison Cap Type.....	505	526
Wolfe Flame Type.....	39	42
Total.....	544	568

SUB-BITUMINOUS COAL FIELD

Portable Electric Lamps, Edison Cap Type.....	276	257
Wolfe Flame Type.....	18	16
Total.....	294	273

QUANTITY OF EXPLOSIVES USED IN POUNDS FOR BLASTING COAL

BITUMINOUS COAL FIELD

Area	Name of Explosives							Total
	Pellet	Monobel	EL-100	CXL-ite	Airdox	Cardox	Forcite	
Group 1:								
Cascade.....	...	36,550	...	...	...	...	...	36,550
Smoky River.	...	4,300	...	...	...	...	...	4,300
Group 2:								
Crowsnest...	...	2,078	86,400	...	...	...	...	88,478
Group 3:								
Lethbridge..	...	400	...	...	...	...	...	400
Total.....	...	43,328	86,400	...	...	...	...	129,728

SUB-BITUMINOUS COAL FIELD

Group 4:								
Ardley.....	...	3,810	...	...	...	...	...	3,810
Brooks.....	...	...	1,600	...	...	...	...	1,600
Carbon.....	...	30	...	...	...	...	230	260
Champion....	...	150	...	...	...	...	...	150
Drumheller..	...	100	...	...	12,800	...	...	12,900
Edmonton....	...	9,535	...	...	...	...	...	9,535
Pembina.....	...	...	500	...	...	...	3,786	4,286
Wetaskiwin..	...	...	...	...	...	...	45	45
Group 5:								
Camrose.....	...	...	...	...	...	...	300	300
Castor.....	...	13,868	515	...	...	...	...	14,383
Redcliff....	...	180	...	...	...	...	...	180
Tofield.....	...	...	...	...	...	...	2,985	2,985
Westlock....	...	...	400	...	...	...	...	400
Total.....	...	27,673	3,015	...	12,800	...	7,346	50,834

THE MINES DIVISION

ESTIMATED NUMBER OF SHOTS FIRED FOR BLASTING COAL

BITUMINOUS COAL FIELD

Area	Electric Detonators	Electric Squibs	Airdox	Total
Group 1:				
Cascade.....	35,170	...	...	35,170
Smoky River.....	3,000	...	...	3,000
Group 2:				
Crowanest.....	3,100	...	...	3,100
Group 3:				
Lethbridge.....	820	...	...	820
Total.....	42,090	...	...	42,090

SUB-BITUMINOUS COAL FIELD

Group 4:				
Ardley.....	3,998	...	...	3,998
Brooks.....	2,190	...	...	2,190
Carbon.....	366	...	...	366
Champion.....	50	...	...	50
Drumheller.....	40	...	12,800	12,840
Edmonton.....	10,420	...	...	10,420
Pembina.....	3,271	...	...	3,271
Wetaskiwin.....	25	...	...	25
Group 5:				
Camrose.....	489	...	...	489
Castor.....	15,226	...	...	15,226
Redcliff.....	142	...	...	142
Tofield.....	898	...	...	898
Westlock.....	400	...	...	400
Total.....	37,515	...	12,800	50,315

NUMBER OF TONS OF COAL PRODUCED PER POUND OF
EXPLOSIVES USED

BITUMINOUS COAL FIELD

Area	Number of tons of coal mined	Number of pounds of explosives used	Tons of coal mined per pound of explosives used
Group 1:			
Cascade.....	288,954	36,550	7.90
Smoky River.....	24,835	4,300	5.77
Group 2:			
Crownsnest.....	620,962	88,478	7.02
Group 3:			
Lethbridge.....	3,085	400	7.71
Total.....	937,836	129,728	7.23

SUB-BITUMINOUS COAL FIELD

Group 4:			
Ardley.....	25,130	3,810	6.59
Brooks.....	5,160	1,600	3.23
Carbon.....	7,457	260	28.68
Champion.....	458	150	3.05
Drumheller.....	185,037	12,900	14.34
Edmonton.....	63,123	9,535	6.62
Pembina.....	1,196,637	4,286	279.20
Taber.....	9,929	...	...
Wetaskiwin.....	114	45	2.53
Group 5:			
Camrose.....	16,842	300	56.14
Castor.....	859,694	14,583	59.77
Redcliff.....	541	180	3.00
Sheerness.....	259,720	...	...
Tofield.....	12,026	2,985	4.03
Westlock.....	21,855	400	54.64
Total.....	2,663,723	50,834	52.40

THE MINES DIVISION

QUANTITY OF EXPLOSIVES USED IN POUNDS FOR BLASTING ROCK
IN COAL MINES

BITUMINOUS COAL FIELD

Area	Pellet	Monobel	Cilgel	CXL-ite	Airdox	Cardox	Forcite	Total
Group 1:								
Cascade.....	3,050	4,500	...	...	600	8,150
Smoky River.	...	200	...	...	...	...	...	200
Group 2:								
Crowsnest...	2,629	...	...	28,000	30,629
Total.....	...	200	3,050	7,129	...	...	28,600	38,979

SUB-BITUMINOUS COAL FIELD

Group 4:								
Brooks.....	...	590	3,470	...	...	...	...	4,060
Carbon.....	...	13	...	...	...	...	...	13
Drumheller..	...	...	...	...	...	...	60	60
Group 5:								
Redcliff....	...	8	...	...	...	...	...	8
Total.....	...	611	3,470	...	...	...	60	4,141

ESTIMATED NUMBER OF SHOTS FIRED FOR BLASTING ROCK
IN COAL MINES

BITUMINOUS COAL FIELD

Area	Electric Detonators	Electric Squibs	Total
Cascade.....	6,280	...	6,280
Smoky River.....	150	...	150
Crowsnest.....	1,700	...	1,700
Lethbridge.....	820	...	820
Total.....	8,950	...	8,950

SUB-BITUMINOUS COAL FIELD

Brooks.....	103	...	103
Carbon.....	42	...	42
Drumheller.....	77	...	77
Redcliff.....	6	...	6
Total.....	228	...	228

THE MINES DIVISION

ELECTRICITY

Area	Number of Mines using Electricity	Horsepower of Electrical Equipment in Use		Total Horsepower	Purchased Power
		Above Ground	Below Ground		
Ardley.....	1	12	...	12	11,047
Brooks.....	1	40	...	40	64,740
Camrose.....	1	12	...	12	...
Carbon.....	3	48	137	185	11,507
Cascade.....	1	5,208	1,024	6,232	9,560,200
Castor.....	3	3,774	...	3,774	4,403,029
Champion.....	1	15	...	15	...
Crowsnest.....	1	3,424	1,505	4,929	10,983,112
Drumheller.....	4	1,442	852	2,294	1,078,433
Edmonton.....	4	437	1,130	1,567	403,890
Lethbridge.....	1	40	149	189	3,700
Pembina.....	2	6,343	...	6,343	7,042,270
Redcliff.....	1	95	91	186	7,040
Sheerness.....	1	1,588	...	1,588	1,162,900
Smoky River.....	1	...	1,022	1,022	454,400
Taber.....	1	67	...	67	16,781
Tofield.....	1	106	...	106	43,990
Westlock.....	2	38	...	38	23,425
Total.....	30	22,689	5,910	28,599	35,270,464

COAL-CUTTING MACHINERY

Area	No. of Machines Operated by :			Tons of Coal Mined by:	
	Electricity	Compressed Air		Electricity	Compressed Air
		Picks	Machines		
Carbon.....	1	...	...	316	...
Cascade.....	2	8	...	158,126	56,599
Champion.....	...	...	2	...	30
Crowsnest.....	2	180	...	48,970	457,910
Drumheller.....	5	...	...	128,758	...
Edmonton.....	14	...	...	54,026	...
Lethbridge.....	2	...	...	2,560	...
Redcliff.....	2	...	...	1,856	...
Smoky River.....	1	...	...	21,828	...
Total.....	29	188	2	416,440	514,539

ACCIDENTS DURING 1967, CLASSIFIED ACCORDING TO THE MINES
IN WHICH THEY OCCURRED

Name of Operator	Area	Above Ground				Below Ground				Total Above and Below Ground
		Fatal	Serious	Slight	Total	Fatal	Serious	Slight	Total	
Bituminous	Cascade..... Crownest... Smoky River.	..	1	1	2	..	..	2	2	4
		..	1	1	2	..	1	10	11	13
		..	..	..	..	..	1	1	2	2
	
Sub-Bituminous	Pembina..... Totfield.....	..	..	1	1	..	..	..	..	1
		..	..	1	1	..	..	..	..	1
	
	
Total .....		..	2	4	6	..	2	13	15	21

THE MINES DIVISION

ACCIDENTS AS THEY OCCURRED BY MONTHS DURING THE YEAR 1967

Months	Above Ground				Below Ground				Total Above and Below Ground
	Fatal	Serious	Slight	Total	Fatal	Serious	Slight	Total	
January.....	2	2	2
February.....	1	1	..	..	1	1	2
March.....	2	2	2
April.....	1	1	1
May.....	..	2	..	2	..	2	1	3	5
June.....	2	2	2
July.....
August.....	2	2	2
September.....	1	1	..	..	1	1	1
October.....	1	1	..	..	1	1	2
November.....	2	2	..	..	..	..	2
December.....
Total.....	..	2	4	6	..	2	13	15	21

ACCIDENTS OCCURRING IN THE PROVINCE ABOVE AND BELOW GROUND
DURING THE YEAR 1967

Causes	Above Ground				Below Ground				Total Above and Below Ground
	Fatal	Serious	Slight	Total	Fatal	Serious	Slight	Total	
Fall of roof or sides.....	1	4	5	5
Haulage.....	..	1	1	2	..	..	3	3	5
Machinery.....	..	1	..	1	..	1	..	1	2
Miscellaneous.....	2	2	..	..	..	..	2
Slipped and Fell.....	1	1	..	..	2	2	3
Timbering.....	2	2	2
Timber Packing.....	2	2	2
Total.....	..	2	4	6	..	2	13	15	21

ACCIDENTS OCCURRING IN THE PROVINCE ABOVE AND BELOW GROUND FOR THE
YEAR 1967, CLASSIFIED ACCORDING TO THE AREA IN WHICH THEY OCCURRED

BITUMINOUS

Area	Above Ground				Below Ground				Total Above and Below Ground
	Fatal	Serious	Slight	Total	Fatal	Serious	Slight	Total	
Cascade.....	..	1	1	2	..	..	2	2	4
Crowsnest.....	..	1	1	2	..	1	10	11	13
Smoky River.....	1	1	2	2
Total.....	..	2	2	4	..	2	13	15	19

SUB-BITUMINOUS

Pembina.....	..	..	1	1	..	..	..	..	1
Tofield.....	..	..	1	1	..	..	..	..	1
Total.....	..	..	2	2	..	..	..	..	2

THE MINES DIVISION

NUMBER OF TONS PRODUCED PER ACCIDENT

BITUMINOUS COAL FIELD

Area	Output	No. of Tons Produced Per Accident			
		Fatal	Serious	Slight	Total
Group 1:					
Cascade.....	288,954	...	288,954	96,318	72,238
Smoky River.....	24,835	...	24,835	24,835	12,417
Group 2:					
Crowsnest.....	620,962	...	310,481	56,451	47,766
Group 3:					
Lethbridge.....	3,085	...	...	...	...
Total.....	937,836	...	234,459	62,522	49,360

SUB-BITUMINOUS COAL FIELD

Group 4:					
Ardley.....	25,130	...	...	...	...
Brooks.....	5,160	...	...	...	...
Carbon.....	7,457	...	...	...	...
Champion.....	458	...	...	...	...
Drumheller.....	185,037	...	...	...	...
Edmonton.....	63,123	...	...	...	...
Pembina.....	1,196,637	...	...	1,196,637	1,196,637
Taber.....	9,929	...	...	...	...
Wetaskiwin.....	114	...	...	...	...
Group 5:					
Camrose.....	16,842	...	...	...	...
Castor.....	859,694	...	...	...	...
Redcliff.....	541	...	...	...	...
Sheerness.....	259,720	...	...	...	...
Tofield.....	12,026	...	...	12,026	12,026
Westlock.....	21,855	...	...	...	...
Total.....	2,663,723	...	...	1,331,861	1,331,861

SUMMARY

Bituminous.....	937,836	...	234,459	62,522	49,360
Sub-bituminous.....	2,663,723	...	...	1,331,861	1,331,861
Total.....	3,601,559	...	900,390	211,856	171,503

CLASSIFICATION OF ACCIDENTS ACCORDING TO OUTPUT OF MINES WHICH PRODUCED DURING THE YEAR 1967

Accidents	Under 1,000 tons	1,000 to 5,000 tons	5,000 to 10,000 tons	10,000 to 50,000 tons	50,000 to 100,000 tons	100,000 to 150,000 tons	150,000 to 200,000 tons	200,000 to 300,000 tons	Over 300,000 tons	Total
Fatal.....
Serious.....	1	...	...	...	1	2	4
Slight.....	1	2	...	...	...	3	11	17
Total.....	1	3	...	...	...	4	13	21

TONS OF COAL PRODUCED PER ACCIDENT

Fatal.....	...	...	...	...	...	...	...	...	...	...
Serious.....	...	...	...	249,792	...	...	...	807,402	1,145,764	900,390
Slight.....	...	...	48,088	124,896	...	...	...	269,134	208,321	211,856
Total.....	...	...	48,088	83,264	...	...	...	201,850	176,271	171,503

THE MINES DIVISION

ACCIDENTS

SUMMARY TABLE SHOWING ACCIDENTS OCCURRING IN THE MINES FROM 1948 to 1967
INCLUSIVE, REPORTABLE UNDER THE MINES REGULATION ACT.

Year	Output	Accidents			Tons of Coal Mined Per Accident		
		Fatal	Serious	Slight	Fatal	Serious	Slight
1948.....	8,111,013	13	91	93	623,924	89,132	87,215
1949.....	8,616,983	13	89	108	662,076	96,708	79,694
1950.....	8,118,206	20	86	97	405,910	94,398	83,693
1951.....	7,661,276	9	85	53	851,253	90,133	144,552
1952.....	7,194,472	7	79	79	1,027,782	91,069	91,069
1953.....	5,917,423	10	59	60	591,742	100,295	98,623
1954.....	4,859,136	8	51	41	607,392	95,277	118,516
1955.....	4,456,578	3	54	52	1,485,526	82,529	85,703
1956.....	4,329,639	6	34	33	721,607	127,342	131,201
1957.....	3,155,354	2	25	15	1,577,677	126,214	210,357
1958.....	2,519,939	6	19	8	419,990	132,628	314,992
1959.....	2,549,517	1	18	10	2,549,517	141,639	254,952
1960.....	2,404,093	2	16	21	1,202,047	150,256	114,481
1961.....	2,027,826	1	9	11	2,027,826	225,314	184,348
1962.....	2,087,310	4	5	23	521,827	417,462	90,753
1963.....	2,289,943	1	3	11	2,289,943	763,314	208,177
1964.....	2,971,133	1	3	20	2,971,133	990,378	148,557
1965.....	3,413,928	6	3	13	568,988	1,137,976	262,610
1966.....	3,467,254	1	4	28	3,467,254	866,814	123,830
1967.....	3,601,559	...	4	17	...	900,390	211,856

COMPARISON OF PROTECTIVE CLOTHING USED FOR THE YEARS
1965, 1966 and 1967.

Clothing	1965	1966	1967
Hard Hats.....	977	873	1,114
Safety Shoes, pairs..	660	533	746
Goggles, pairs.....	177	164	179
Knee Pads, pairs....	25	6	2

THE MINES DIVISION

BOARD OF EXAMINERS

The Board of Examiners during the year 1967 consisted of the following:

As representing:

The Mine Inspectorate: J. D. B. Brown, Director of Mines.
 Managers: H. Crawford and E. J. Panchysyn.
 Underground Miners: G. B. Hunter.
 Strip Mine Workers: K. D. Wiltse.
 Secretary: M. B. Rasmussen.

Examinations for the following classes of certificates were held in Edmonton and Calgary on May 2nd, 1967.

Five candidates presented themselves for examination for Third Class (Underground) Certificates, and two were successful.

Two candidates presented themselves for examination for First Class Mine Electricians' Certificates, and one was successful.

One candidate presented himself for examination for Second Class Mine Electrician's Certificate, and he was unsuccessful.

Two candidates presented themselves for examination for Surveyors' (Underground) Certificates, and both were unsuccessful.

One candidate presented himself for examination for Surveyor's (Strip Mine) Certificate, and he was successful.

One candidate presented himself for examination for Manager's (Strip Mine) Certificate, and he was unsuccessful.

Six candidates presented themselves for examination for Foremen's (Strip Mine) Certificates, and five were successful.

The following list gives the names of successful candidates.

UNDERGROUND MINES

THIRD CLASS

Name	Address	Cert. No.	Date of Certificate
Bramer, Robert V.	Coleman	26	5- 6-67
Makin, Gordon C.	Hillcrest	27	6-11-67

FIRST CLASS MINE ELECTRICIAN

Hanna, Allan M.	Shaughnessy	16	8- 6-67
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STRIP MINES

FOREMAN

Warner, Donald M.	Forestburg	49	5- 6-67
McLellan, Daniel A.	Wabamun	51	6- 6-67
Latchford, James A.T.	Sheerness	52	25- 8-67
Siebel, Adolf Horst	Halkirk	53	28- 9-67
Anderson, Eric	Rosedale	55	22-12-67

SURVEYOR

Shirley, Philip H.	Edmonton	2	6- 7-67
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In addition to the foregoing, the following certificate was issued to a candidate successful in the examinations held in May, 1965.

STRIP MINES
FOREMAN

Petryshen, Albert	Ryley	54	25-10-67
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Also in addition to the foregoing, the following Interchange First Class Certificate (Underground Mine) was issued under Sec. 79 of The Coal Mines Regulation Act.

Hulbert, Vans H.	Hinton	3	13- 6-67
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The following substitute Third Class Certificate was issued:

Menzies, Alan R.	Western Monarch	25	11- 5-67
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The following certificate as Manager (Strip Mine) was issued, without examination, under Section 74 (2) of The Coal Mines Regulation Act.

Chamberlin, James H.H.	Coleman	20	5- 6-67
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EXAMINATIONS UNDER THE QUARRIES REGULATION ACT

Written examinations for certificates under the above Act were held during the year, on May 2nd, May 6th, September 7th and October 24th.

Eleven candidates presented themselves for examination for Managers' Certificates, and five were successful.

Eighteen candidates presented themselves for examination for Foremen's Certificates, and nine were successful.

The following list gives the names of successful candidates.

QUARRIES
MANAGER

Name	Address	Cert. No.	Date of Certificate
Moore, John A.G.	Edmonton	27	12- 5-67
Gotts, Robert J.	Edmonton	28	5- 6-67
Kervin, John K.	Fort McMurray	29	31- 7-67
Lattanzi, Christopher R.	Fort McMurray	30	8- 8-67
Hogg, William	Fort McMurray	31	13- 9-67

THE MINES DIVISION

FOREMAN

Biggy, George	Canmore	48	12- 5-67
Koelbl, Josef	Sherwood Park	49	12- 5-67
Harasyn, Michael	Tar Island	50	12- 5-67
Blackwood, John W.	Canmore	51	1- 6-67
Rempel, Benjamin	Fort McMurray	52	31- 7-67
Tuchiwsky, Nick	Fort McMurray	53	31- 7-67
Greig, Roy A.	Fort McMurray	54	31- 7-67
Youngberg, Lorne W.	Fort McMurray	55	13- 9-67
Childs, William	Fort McMurray	56	13- 9-67

The following list gives the names of successful candidates, by oral examination, for Quarry Blasters' Certificates.

BLASTER

Proc, John W.	Coleman	66	17-10-67
Smode, Adolf	Robb	67	14-11-67

LIST OF MINES PRODUCING DURING

The Year 1967

Character of Coal:- Bituminous

MINE NO.	OPERATOR	MINE OFFICE ADDRESS	MINE LOCATION L.S. S. T. R. M.	REGISTERED TRADE NAME	DATE OF OPENING
2	Cascade Area The Canmore Mines Limited...	Canmore.....	Parts 24-10-5	Canmore Smokeless Coal, Canmore Briquettes.....	1891
1695 1747 1764	Crowsnest Area Coleman Collieries Ltd..... Coleman Collieries Ltd..... Coleman Collieries Ltd.....	Coleman..... Coleman..... Coleman.....	12- 7- 6-5 16-19- 9- 4-5 56-10- 4-5	Coleman Coal..... Vicary Creek Coal..... Vicary Creek Coal.....	1949 1957 1966
1762	Lethbridge Area Silkstone Resources Ltd..... Smoky River Area	Shaughnessy.....	2 & S $\frac{1}{2}$ 7-21-10-21-4	Diamond Coal.....	1965
1765	McIntyre Coal Mines Ltd.....	Hinton.....	57- 8-6 & 58- 9	.....	1967

THE MINES DIVISION

LIST OF MINES PRODUCING DURING

The Year 1967

Character of Coal:— Sub-bituminous

MINES NO.	OPERATOR	MINE OFFICE ADDRESS	MINE LOCATION L. S. S. T. R. M.	REGISTERED TRADE NAME	DATE OF OPENING
809 1734	Ardley Area Sisson's Mine..... John Lynass.....	Alix..... Delburne.....	S.W. $\frac{1}{4}$ of 2-39-23-4 7-20-38-23-4	Sisson's Coal..... Lynass Coal.....	1919 1953
1404	Brooks Area Kleenbirt Collieries Ltd.....	Bow City.....	Pts. of 15-17-17-4	Birnwell Coal.....	1932
724	Camrose Area Burnstad Coal Ltd.....	Round Hill.....	N. $\frac{1}{2}$ of 6-14-48-18-4	Burnstad's Coal.....	1917
53 194 921	Carbon Area Alfred Fox..... New Ghost Pine Coal Co. Ltd.... Erich Reissig.....	Carbon..... Three Hills..... Trochu.....	15-11-29-23-4 489-31-22-4 15616-14-33-23-4	Carbon Sunrise Coal..... New Ghost Pine Coal..... Meadow Bank Coal.....	1898 1909 1921
1046	Castor Area Battle River Coal Co. Ltd....	Halkirk.....	15616-20-40-15-4	Cordell Coal, Vesta Coal, Sterling, Victory Coal, Blue Flame Coal.....	1922 1941 1943
1578 1614	Forestburg Collieries Ltd.... Stettler Coal Co. Ltd.....	Forestburg..... Halkirk.....	N.W. $\frac{1}{4}$ of 6-41-15-4 11-25-40-16-4	Diplomat Coal, Ambassador..... All-Fire Coal.....	
1509	Champion Area Champion Coal Mine.....	Champion.....	13-34-15-23-4	Champion Coal.....	1937

LIST OF MINES PRODUCING DURING

The Year 1967

Character of Coal:- Sub-bituminous

MINE NO.	OPERATOR	MINE OFFICE ADDRESS	MINE LOCATION L.S. S. T. R. M.	REGISTERED TRADE NAME	DATE OF OPENING
1666 1742	Drumheller Area Subway Coal Company..... Century Coals Limited.....	Rosedale..... East Coulee.....	15-16-28-19-4 14- 6-27-18-4	Subway Coal..... Atlas Coal, Commander Coal, New Wild Fire Coal, New Murray Coal, Western Gem, Hy-Grade, Purity Hard..... Utility Coal..... Premier Coal.....	1947 1956 1960 1964
1756 1759	Fox Coulee Coals Ltd..... Premier Coal.....	Drumheller..... East Coulee.....	W. $\frac{1}{2}$ 11&E $\frac{1}{2}$ 12 18-28-19-4		
720 1582 1626 1727	Edmonton Area Slide Hill Coal Co. Ltd..... Egg Lake Coal Co. Ltd..... Star-Key Mines Limited..... Whitemud Creek Coal Co. Ltd.....	Edmonton..... Morinville..... St. Albert..... Edmonton.....	N.W. $\frac{1}{4}$ of 5-51-25-4 W. $\frac{1}{2}$ of 36-56-26-4 16, 10&11-35-54-25-4 S.W. $\frac{1}{4}$ of 13-52-25-4	Slide Hill Coal..... Egg Lake Coal..... Star-Key Coal..... Red Hot Coal.....	1960 1941 1945 1952
1670 1739 1737	Pembina Area Warburg Coal Co. Ltd..... Charles Ostertag..... Alberca Coal Limited.....	Warburg..... Evansburg..... Wabamun.....	S.W. $\frac{1}{4}$ of 12-13-49- 3-5 Pts. of 10-54- 7-5 11&15-53- 4-5	Pinter Coal..... Pembina Peerless Coal..... Whitewood.....	1948 1954 1962
772	Redcliff Area Ajax Coal Company.....	Medicine Hat.....	1- 6-13- 6-4	Ajax Coal.....	1918
443	Sheerness Area Battle River Coal Company Limited.	Sheerness.....	S.E. $\frac{1}{4}$ of 13-29-13-4	Roselyn, Berry Creek, Volcano.....	1915

THE MINES DIVISION

LIST OF MINES PRODUCING DURING

The Year 1967

Character of Coal:- Sub-bituminous

MINE NO.	OPERATOR	MINE OFFICE ADDRESS	MINE LOCATION L.S. S. T. R. M.	REGISTERED TRADE NAME	DATE OF OPENING
1604	Taber Area Henry Miller (Taber Ajax)..... Tofield Area	Taber.....	1&12-10-17-4	Taber Ajax.....	1943
215	Jet Construction Ltd..... Westlock Area	Ryley.....	S. 1/2 of 14-49-18-4	Red Flame Coal.....	1909
1523 1562	Picardville Coal Co. (1960) Ltd. North Point Coal Co. Ltd..... Wetaskiwin Area	Picardville..... Thorhild.....	16-35-58-27-4 1-11-60-21-4	Picardville Coal..... North Point Coal.....	1960 1939
1743	Blue Bird Coal Co. Ltd.....	Leduc.....	12&13-20-48-25-4	Blue Bird Coal.....	1956

LIST OF QUARRIES PRODUCING DURING

The Year 1967

QUARRY NO.	OPERATOR	QUARRY OFFICE ADDRESS	PRODUCT	QUARRY LOCATION L.S., S. T., R., M.	DATE OF OPENING
Q 2	Cascade Area	Canada Cement Company Limited.....	Limestone.....	Pts. of 27&28-24- 9-5	1906
Q 27		Canada Cement Company Limited.....	Shale.....	7-23- 8-5	1956
Q 28		Rundie Rock Building Stone Co., Ltd.....	Blng. Stone.....	17,18&19-23-10-5	1962
Q 47		Loders' Lime Division.....	Limestone.....	24-24-10-5	1960
Q 50		Ribbon Creek Quarries Ltd.....	Blng. Stone.....	15,16& 2-23- 9-5	1960
Q 57		Alberta Rundie Rock Ltd.....	Blng. Stone.....	11&11- 7-24- 9-5	1962
Q 58		Thunderstone Quarries Ltd.....	Blng. Stone.....	12- 7-24- 9-5	1961
Q 37		Castor Area Magcobar Mining Company, Limited.....	Bentonite.....	15&16-31-42-17-4	1958
Q 8	Edmonton Area	Crowsnest Area Summit Lime Works Ltd.....	Limestone.....	Pts. of 7- 8- 5-5	1920
Q 5		Northwest Brick and Tile.....	Shale.....	21-53-25-4	1911
Q 22		Inland Cement Company Limited.....	Shale.....	15&22-53-25-4	1955
Q 21		Mountain Park Area Inland Cement Company Limited.....	Limestone.....	13-30-46-23-5	1955
Q 64	Magrath Area	Magrath Area Alberta Oyster Shell Co.....	Limestone.....	5- 3- 4-27-4	1964

THE MINES DIVISION

LIST OF QUARRIES PRODUCING DURING

The Year, 1967

QUARRY NO.	OPERATOR	QUARRY OFFICE ADDRESS	PRODUCT	QUARRY LOCATION L.S. S. T. R. M.	DATE OF OPENING
Q 34 Q 39 Q 43 Q 86	Pakowki Area Medicine Hat Brick & Tile Company, Limited. Medicine Hat Brick & Tile Company, Limited. Medicine Hat Brick & Tile Company, Limited. Medicine Hat Brick & Tile Company, Limited.	Medicine Hat..... Medicine Hat..... Medicine Hat..... Medicine Hat.....	Shale..... Shale..... Shale..... Shale.....	5, 6, 11&12-20- 8- 3-4 5-20- 8- 4-4 10&15- 9- 8- 4-4 6-11- 7- 2-4	1957 1959 1959 1967
Q 7 Q 14	Redcliff Area Medicine Hat Brick & Tile Company, Limited. Medicine Hat Brick & Tile Company, Limited.	Redcliff..... Medicine Hat.....	Shale..... Shale.....	S.W. $\frac{1}{2}$ of 9-13- 6-4 1&2-31-12- 4-4	1913 1951
Q 24 Q 60	No Area Consolidated Concrete Industries Ltd..... Consolidated Concrete Limited.....	Calgary..... Calgary.....	Shale..... Shale.....	3, 4&5-32-21-29-4 7&8-36-21- 1-5	1956 1962
Q 36 Q 41 Q 65	No Area Northwest Brick and Tile..... Syncrude Canada Ltd..... Great Canadian Oil Sands Limited.....	Edmonton..... Edmonton..... Edmonton.....	Shale..... Oil-Sands..... Oil-Sands.....	N.E. $\frac{1}{2}$ of ⁹ 5&6-16-66-22-4 15-34-92-10-4 23-92-10-4	1958 1959 1964

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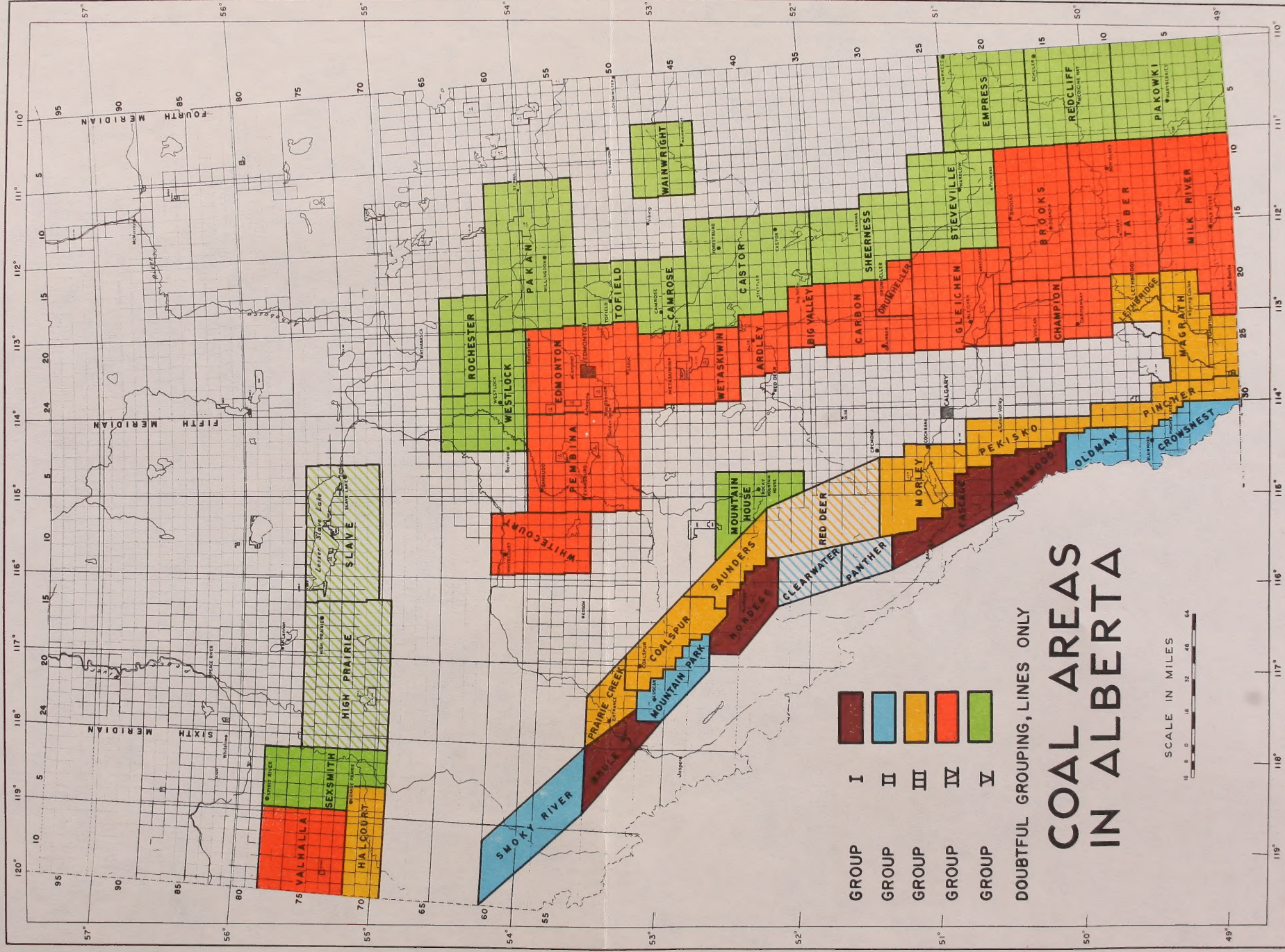
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COAL AREAS IN ALBERTA

COAL AREAS, ALBERTA, CANADA

COAL TYPE	AREA (sq. miles)
Subbituminous A	1,200
Subbituminous B	1,800
Subbituminous C	1,200
Semianthracite	1,200
Anthracite	1,200
Bituminous	1,200



